

**VIRGINIA STANDARDS OF LEARNING**

**Spring 2004 Released Test**

**END OF COURSE**  
**Geometry**

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**LARGE PRINT FORM**

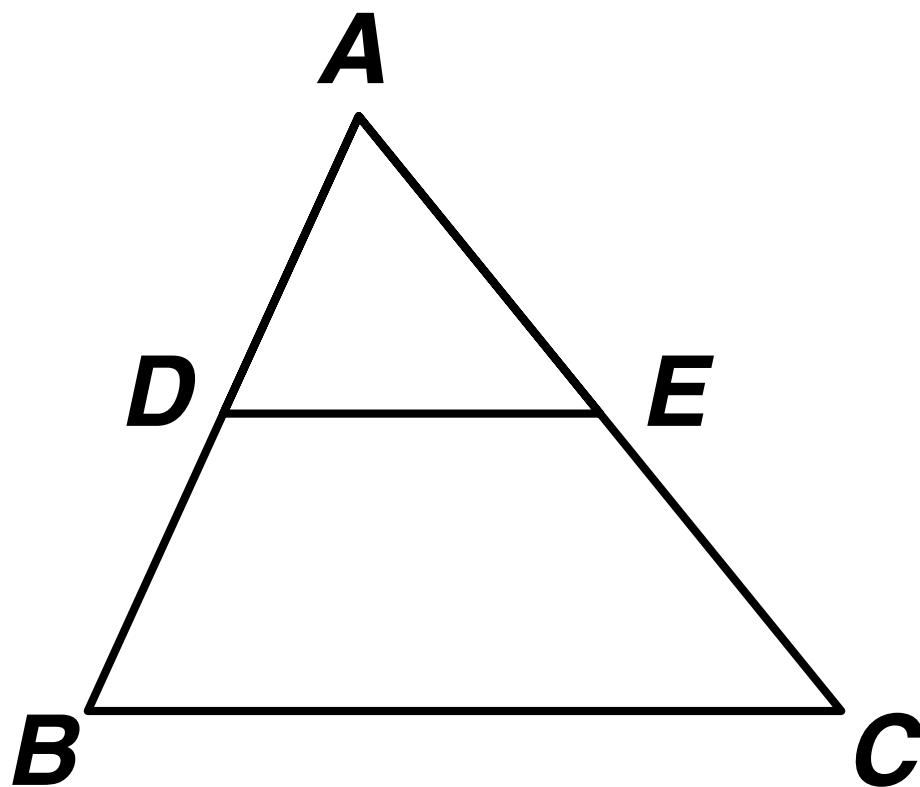
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## DIRECTIONS

Read and solve each question.

## SAMPLE



If  $\triangle ABC$  is similar to  $\triangle ADE$ , then  $AB : AD = ? : AE$ .

Which replaces the “?” to make the statement true?

- A  $AC$
- B  $AE$
- C  $DE$
- D  $BC$

1 The coordinates of the midpoint of  $\overline{AB}$  are  $(-2, 1)$ , and the coordinates of  $A$  are  $(2, 3)$ . What are the coordinates of  $B$ ?

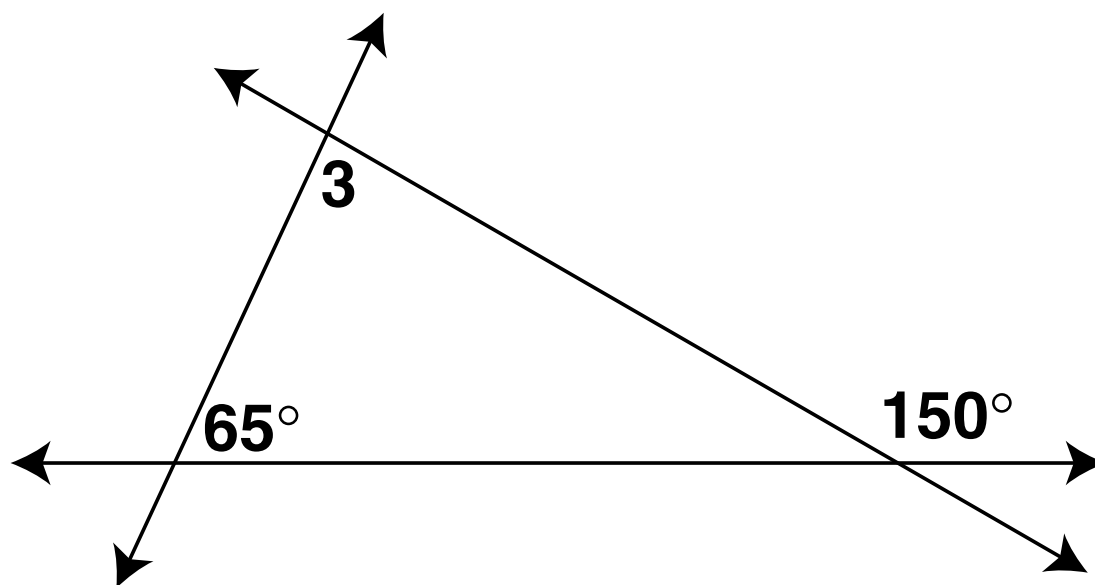
A  $(0, 2)$

B  $(-1, 2)$

C  $(-3, 4)$

D  $(-6, -1)$

2



What is  $m\angle 3$ ?

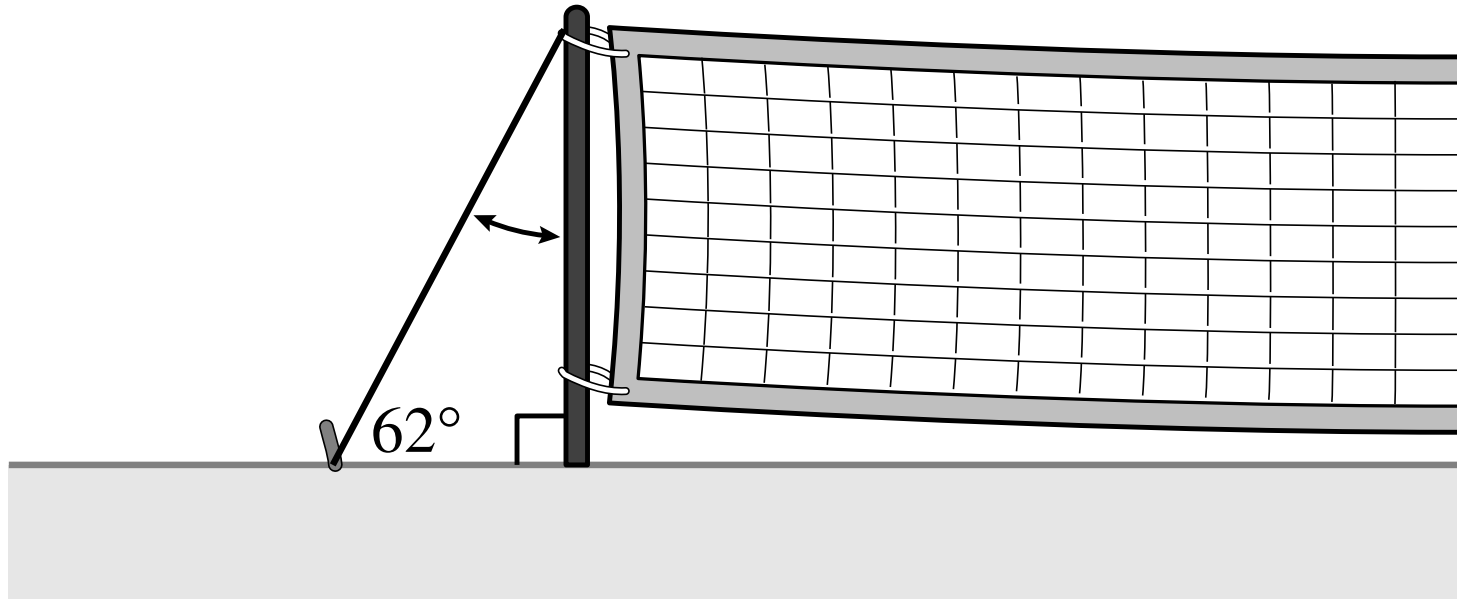
F  $65^\circ$

G  $75^\circ$

H  $85^\circ$

J  $90^\circ$

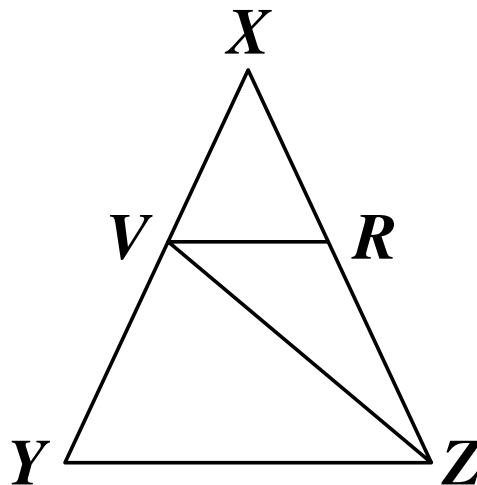
- 3 A guy wire for a pole for a tennis net makes an angle of  $62^\circ$  with the ground.



What is the measure of the angle between the wire and the pole?

- A  $28^\circ$
- B  $62^\circ$
- C  $90^\circ$
- D  $180^\circ$

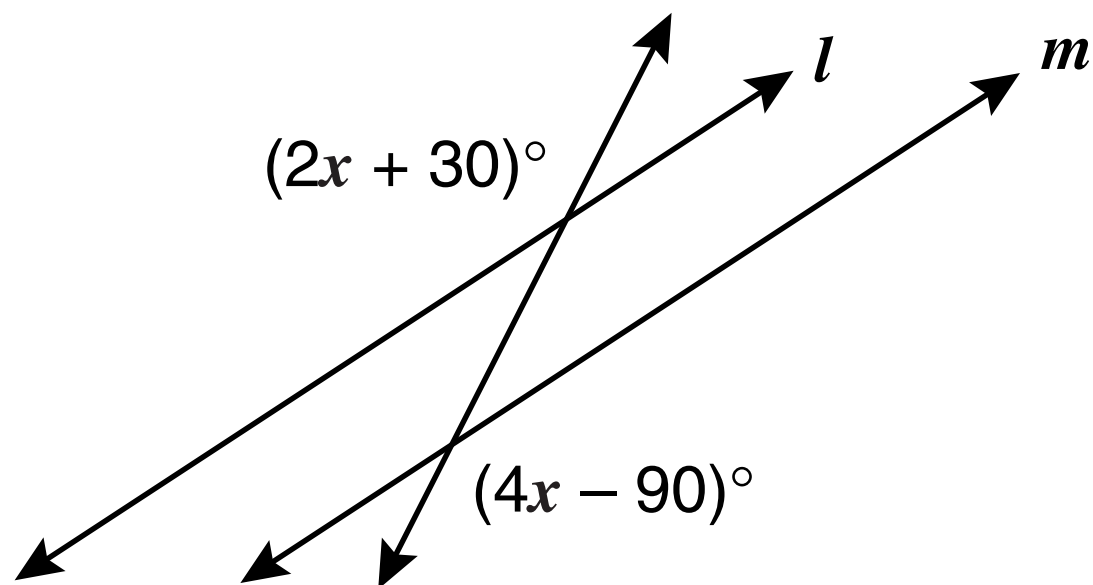
- 4 The measure of  $\angle YZV$  is  $40^\circ$  and the measure of  $\angle XYZ$  is  $65^\circ$ .



Which of these angles **MUST** measure  $40^\circ$  in order for  $\overline{VR}$  to be parallel to  $\overline{YZ}$ ?

- F  $\angle YVZ$
- G  $\angle ZVR$
- H  $\angle ZYV$
- J  $\angle VRX$

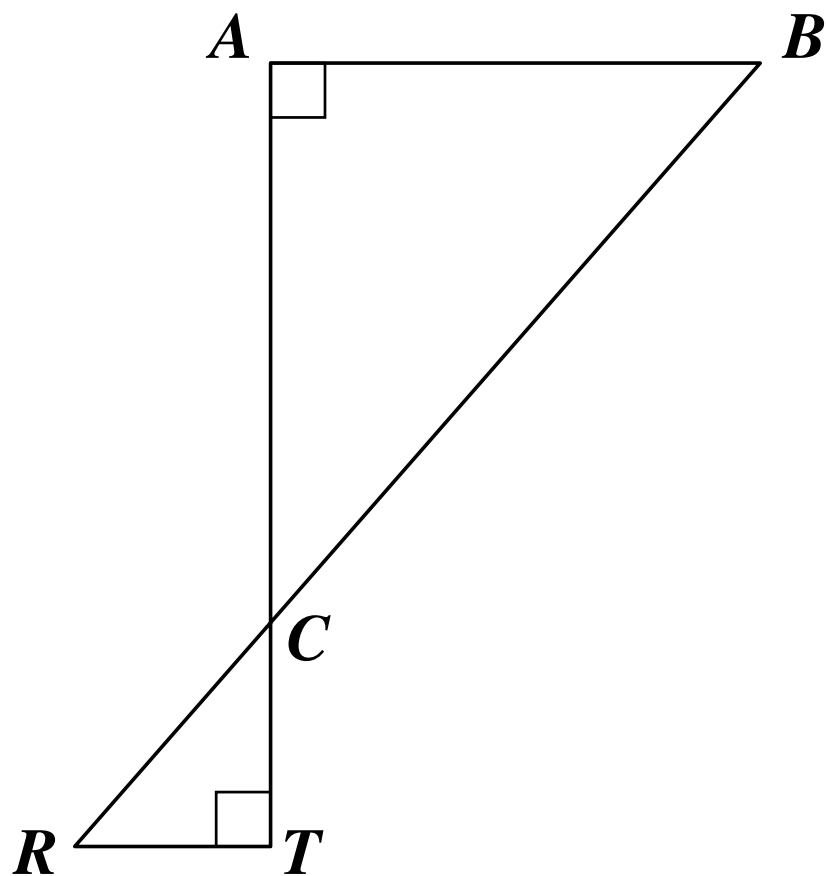
5



What value for  $x$  will show that lines  $l$  and  $m$  are parallel?

- A 25
- B 30
- C 40
- D 60

6



Which of the following correctly describes the relationship between the sides of  $\triangle ABC$  and  $\triangle TRC$ ?

F  $\frac{AB}{TR} = \frac{AC}{RC} = \frac{BC}{TC}$

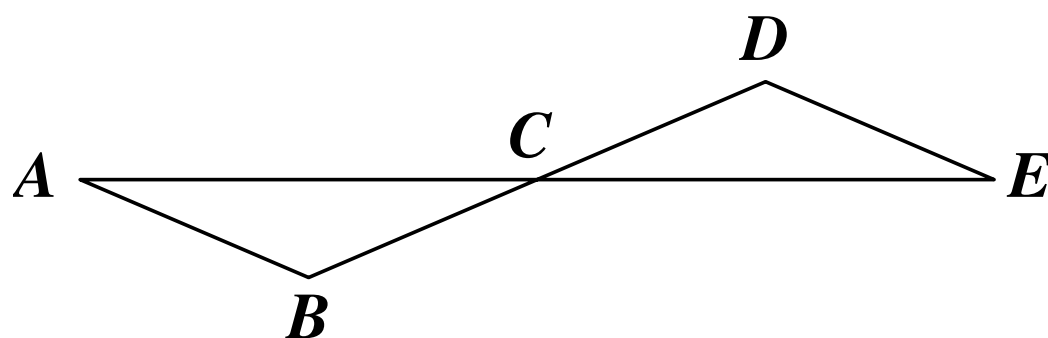
G  $\frac{AC}{AB} = \frac{BC}{RC} = \frac{TR}{TC}$

H  $\frac{AB}{AC} = \frac{BC}{RC} = \frac{TR}{TC}$

J  $\frac{AB}{TR} = \frac{AC}{TC} = \frac{BC}{RC}$



7 Given:  $\overline{AE}$  and  $\overline{BD}$  bisect each other at  $C$ .



Which could be used to prove  $\triangle ABC \cong \triangle EDC$ ?

- A (SSS) If 3 sides of one triangle are congruent to 3 sides of another triangle, then the triangles are congruent.
- B (SAS) If 2 sides and the angle between them in one triangle are congruent to 2 sides and the angle between them in another triangle, then the triangles are congruent.
- C (ASA) If 2 angles and the side between them of one triangle are congruent to 2 angles and the side between them of another triangle, then the triangles are congruent.
- D (AAS) If 2 angles and a side not between them are congruent to 2 angles and a side not between them of another triangle, then the triangles are congruent.

**8 In any  $\triangle ABC$ , which statement is always true?**

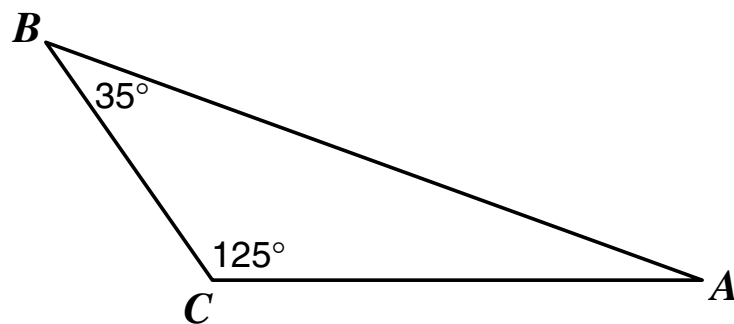
**F  $m\angle A + m\angle B = 90^\circ$**

**G  $m\angle A + m\angle B < 90^\circ$**

**H  $AB + BC > AC$**

**J  $AB + BC < AC$**

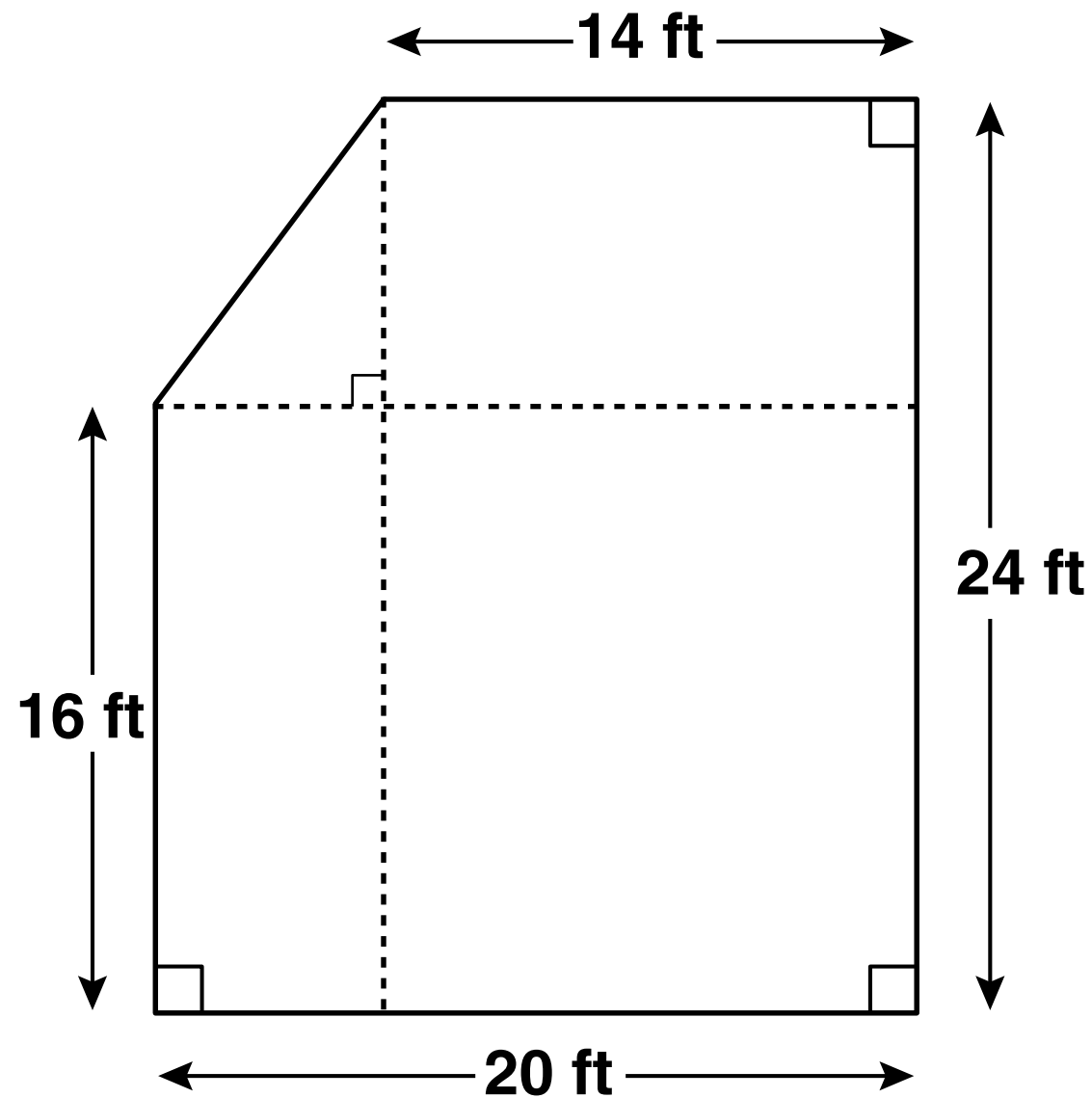
- 9 In the drawing, the measure of  $\angle C = 125^\circ$  and the measure of  $\angle B = 35^\circ$ .



Which is the shortest side of the triangle?

- A  $\overline{AC}$
- B  $\overline{AB}$
- C  $\overline{EB}$
- D  $\overline{BC}$

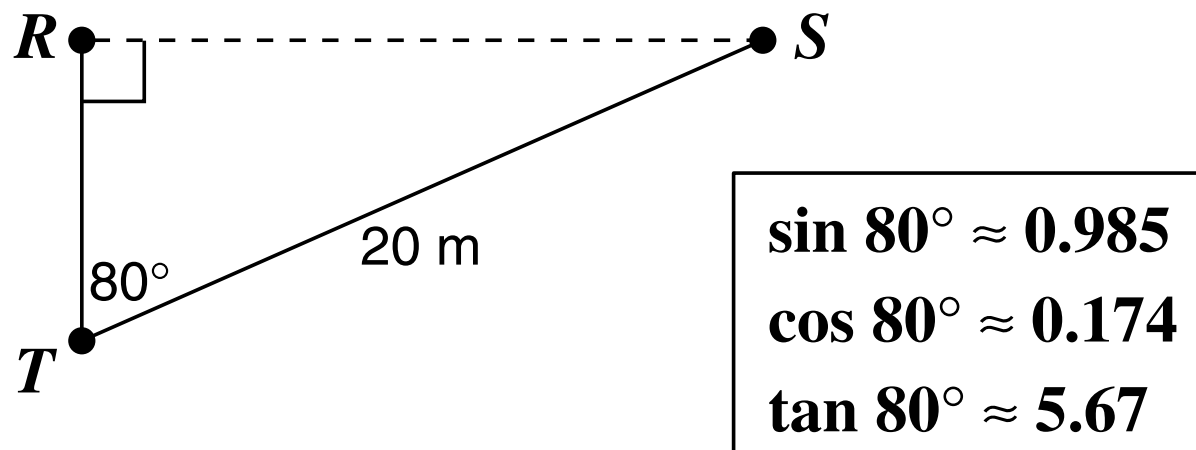
- 10 A customer provided this diagram of a patio to a fencing company.



What is the length of the unlabeled side?

- F 10 ft
- G 11 ft
- H 12 ft
- J 13 ft

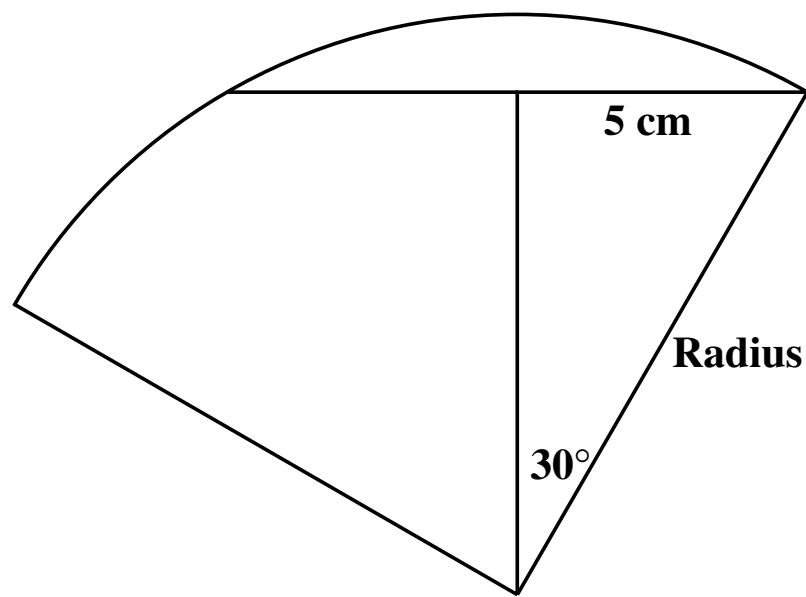
- 11 To determine the distance across a pond, Harry made the measurements shown in the diagram.



Which is CLOSEST to the distance from R to S?

- A 3.48 m
- B 19.7 m
- C 20.3 m
- D 113.4 m

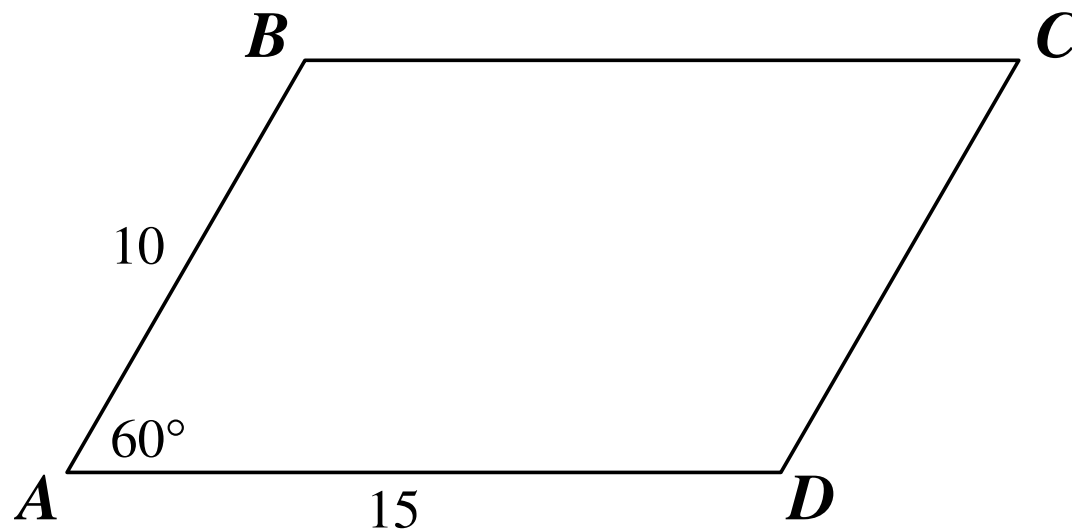
12



The drawing shows the measurements in a section of a circular design. How long is the radius of the circle?

- F 10 cm
- G 8.7 cm
- H 7 cm
- J 4.3 cm

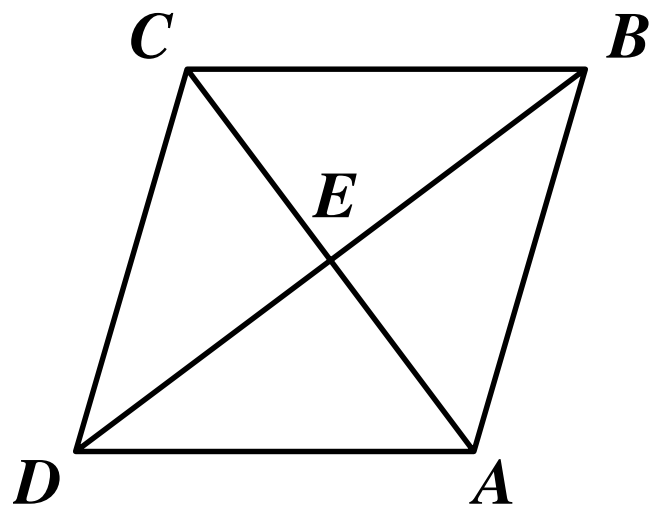
- 13 The lengths of 2 consecutive sides of the parallelogram shown are 10 inches and 15 inches. The 2 sides include an angle of  $60^\circ$ .



To the nearest tenth of a square inch, what is the area of the parallelogram?

- A 21.6 sq in.
- B 129.9 sq in.
- C 139.4 sq in.
- D 140.5 sq in.

14 In rhombus  $ABCD$ ,  $AC = 30$  inches and  $BD = 40$  inches.



What is the perimeter of the rhombus?

F 25 in.

G 50 in.

H 100 in.

J 200 in.



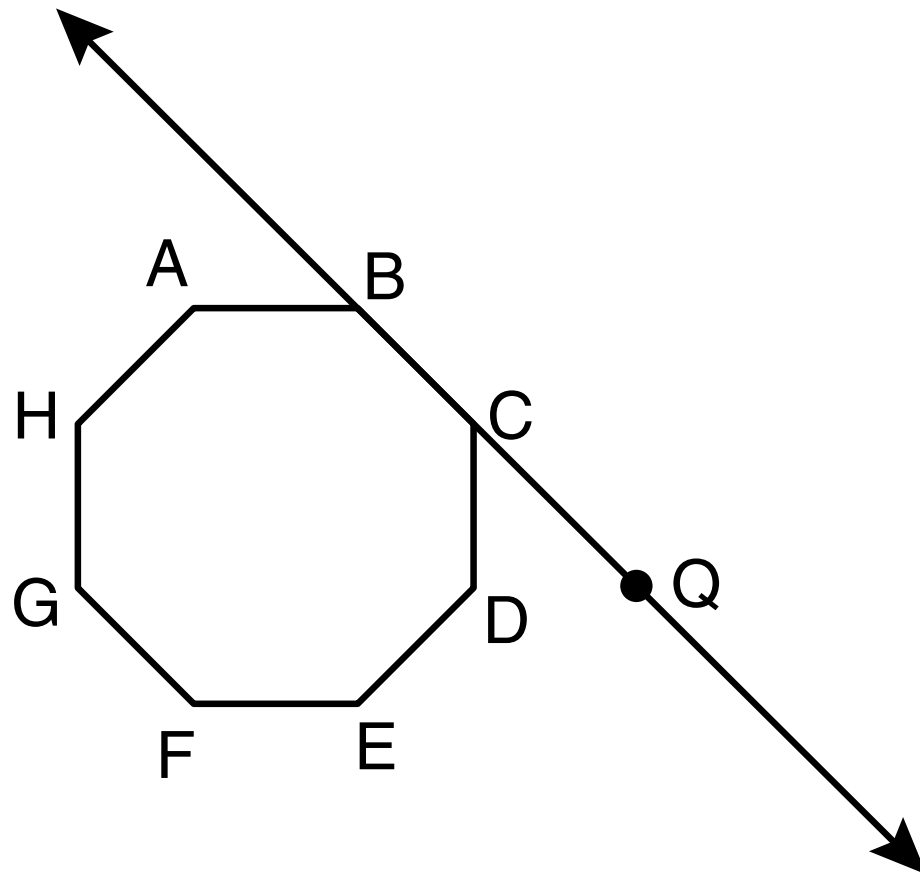
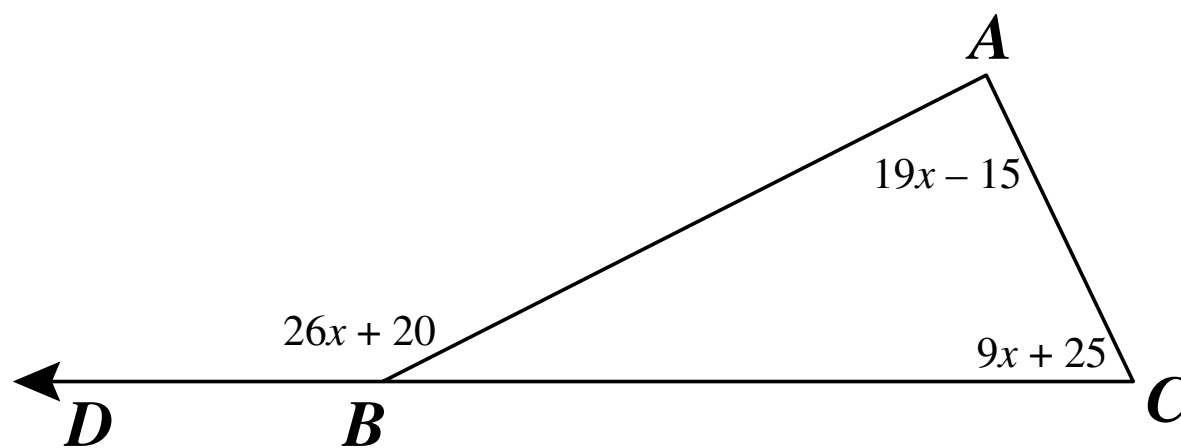


Figure  $ABCDEFGH$  is a regular octagon. What is the measure of  $\angle DCQ$ ?

- A  $135^\circ$
- B  $60^\circ$
- C  $45^\circ$
- D  $30^\circ$

16 The figure has angle measures as shown.



Given: Triangle  $ACB$ , with side  $CB$  extended to point  $D$ . The measure of angle  $A$  is  $(19x - 15)$  degrees, and the measure of angle  $C$  is  $(9x + 25)$  degrees. The exterior angle at  $B$ , angle  $ABD$  measures  $(26x + 20)$  degrees.

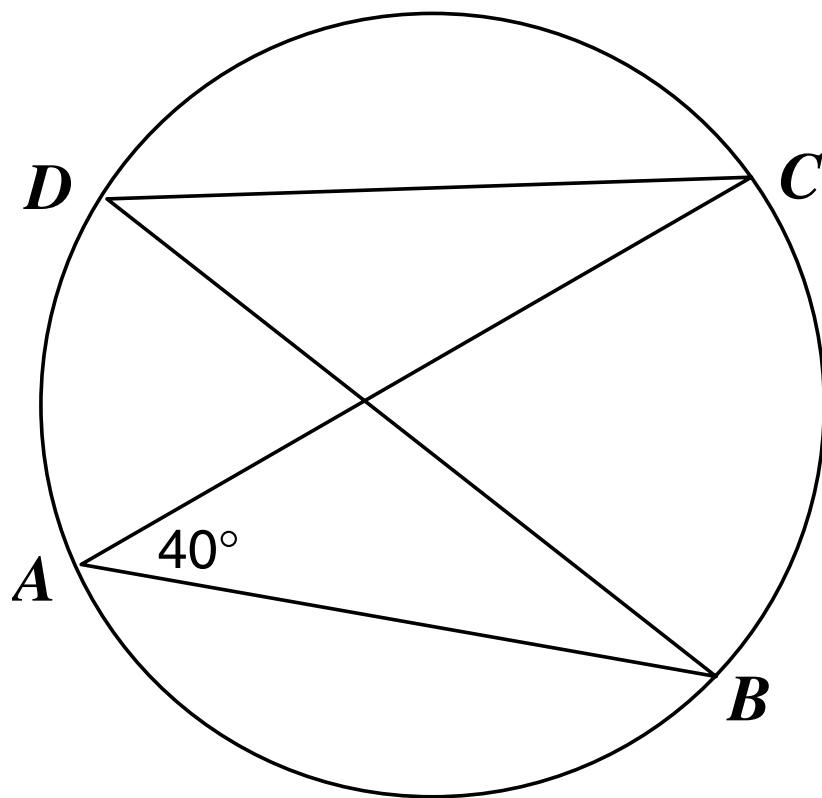
What is the measure of the exterior angle at  $B$ , angle  $ABD$ ?

F  $150^\circ$

G  $80^\circ$

H  $70^\circ$

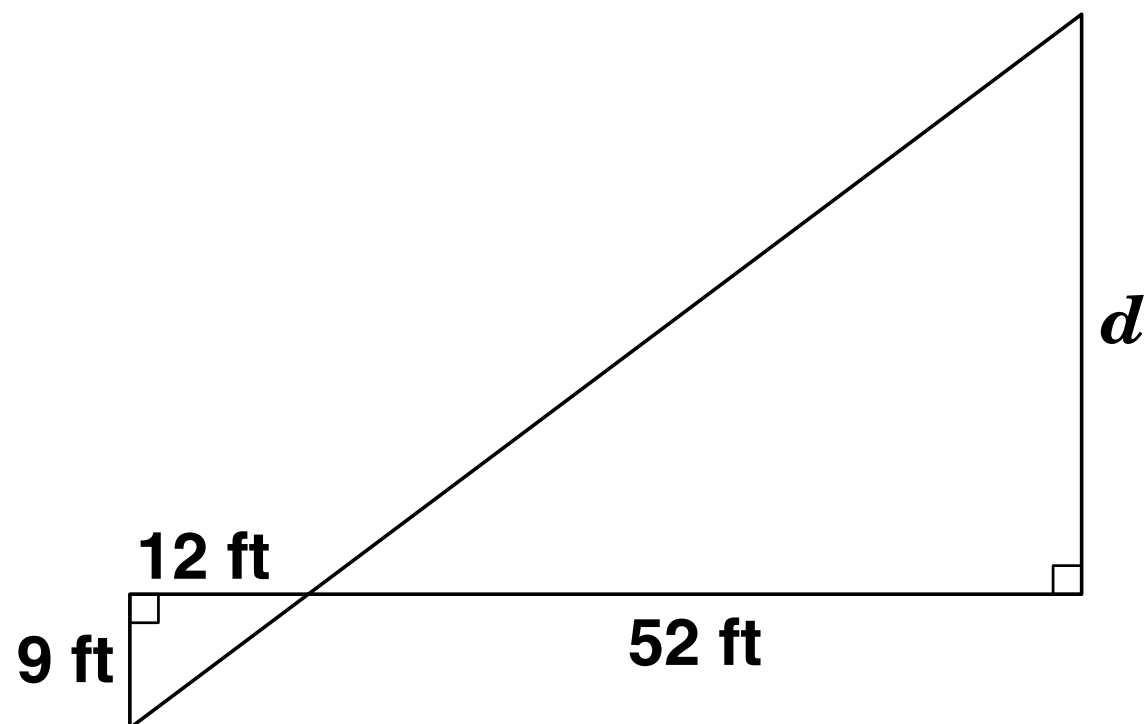
J  $30^\circ$



If  $m\angle CAB = 40^\circ$ , what is  $m\angle CDB$ ?

- A  $20^\circ$
- B  $40^\circ$
- C  $60^\circ$
- D  $80^\circ$

18



The distance across a river was estimated by making the measurements shown. Which is a good estimate of the distance  $d$ ?

F 20 ft

G 30 ft

H 40 ft

J 50 ft

Answer Key

Test Sequence Number	Correct Answer
1	D
2	H
3	A
4	G
5	D
6	J
7	B
8	H
9	D
10	F
11	B
12	F
13	B
14	H
15	C
16	F
17	B
18	H